

**BRADY B-348 BRADY LSZH CABLE MARKER**

TDS No. B-348  
Effective Date: 10/2024

**GENERAL PRODUCT DESCRIPTION:**

**Print Technology:** Thermal Transfer  
**Material Type:** Low smoke, zero halogen type polyolefin wire marker  
**Available Colors:** white, yellow, red, blue, purple, green, brown and gray.

**APPLICATIONS:**

These cable markers are designed for wire identification in areas where low smoke zero halogen performance is needed. They are designed as a high performance wire bundle and cable identification tag for use in harsh environments including long term outdoor use.

**RECOMMENDED RIBBONS**

Brady R6000 halogen free series black ribbon  
Brady R6600 series black ribbon

**REGULATORY APPROVALS**

EN45545-2 requirement set R22/23, vehicle category HL3

**SPECIAL FEATURES**

Low smoke, zero halogen

**Details:**

PROPERTIES	TEST METHODS	TYPICAL RESULTS
Thickness		0.020 ± 0.003"
Tensile Strength	ASTM D882, 20"/min speed	>2000 psi
Ultimate Elongation	ASTM D882, 20"/min speed	>200%
Heat shock	ASTM D2671, 4 hours at 175°C	All colors show no visible effect, print is legible and no cracking when bent over mandrel
Heat aging	168 hours 150°C	All coloured tags darken except for purple which becomes slightly lighter; print legible, no cracking when bent over mandrel
Low temperature flexibility	4 hours @ -55°C	All colors show no visible effect, print is legible and no cracking when bent over mandrel
Operating temperature		-55 to 105°C
Humidity Resistance	30 days at 37°C and 95% RH	No Visible Effect
UV Light Resistance	1 year in Xenon Test Chamber	All colors show No Visible Effect except for green and blue which show some discoloration
Oxygen Index	BS EN ISO 4589-2:1999	>32%
Smoke Density	T10.03 per BS EN 45545-2	<150
Toxic Fume	NF X 70-100:1 and NF X 70-100:2	<0.75

Weatherability	ASTM G154 1 year in QUV	All colors show No Visible Effect except for green which show some discoloration
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**Average Outdoor Durability:**

Outdoor performance expectations for B-348 are based on UV resistance testing in the Q-Sun Xenon Test Chamber Model Xe-3 (Daylight Filter, Irradiance 0.35 W/m<sup>2</sup>, Wavelength 340nm, Continuous light at 63°C black panel temperature) and on weatherability testing in the QUV Accelerated Weathering Tester Model QUV/se, according to ASTM G154, Cycle 1. The test results suggest that B-348 may be used successfully in outdoor environments for a period of up to 10 years. Actual outdoor life of product will depend on user definition of failure, climatic conditions, mounting techniques and material color. See note and warranty statement below for additional information.

**Chemical Resistance**

Samples were thermal transfer printed with Brady R6000 halogen free series and R6600 series black ribbons. Tests were conducted at room temperature after 24 hour dwell. Testing consisted of 5 cycles of 10 minute immersions in the specified chemical reagent followed by 30 minute recovery periods. After the final immersion, the samples were removed from the test fluid and the printed image was rubbed 20 (10 double rubs) times with a cotton swab saturated with the test fluid.

CHEMICAL REAGENT	SUBJECTIVE OBSERVATION OF VISUAL CHANGE			
	R6000 PRINTING WITHOUT RUB	R6000 PRINTING WITH RUB	R6600 PRINTING WITHOUT RUB	R6600 PRINTING WITH RUB
Isopropyl alcohol	1	4	1	2
Methyl Ethyl Ketone	1	5	1	2
Gasoline	1	5	1	2
Diesel Fuel	1	4	1	2
MIL 5606 Oil	1	4	1	2
Skydrol® 500 B-4	1	5	1	1
10% NaCl	1	5	1	2
Deionized Water	1	1	1	1

Note that results are the same for all colors

**PRINT EFFECT**

- 1 = No visible effect
- 2= Slight smear or print removal, detectable but minimal smear
- 3 = Moderate smear or print removal (print still legible)
- 4 = Severe smear or print removal (print illegible or just barely legible)
- 5 = Complete print removal
- NP = print removed prior to rub

**Shelf Life:**

Shelf life is five years from date of receipt for this product as long as this product is stored in its original packaging in an environment at 32-95 degrees F (0-35 degrees C). It remains the responsibility of the user to assess the risk of using this product. We encourage customers to develop testing protocols that will qualify a product's fitness for use in their actual applications.

**Trademarks:**

ASTM: American Society for Testing and Materials (U.S.A.)  
 Skydrol® is a registered trademark of Monsanto Company

**Note:** All values shown are averages and should not be used for specification purposes.

Test data and test results contained in this document are for general information only and shall not be relied upon by Brady customers for designs and specifications, or be relied on as meeting specified performance criteria. Customers desiring to develop specifications or performance criteria for specific product applications should contact Brady for further information.

Product compliance information is based upon information provided by suppliers of the raw materials used by Brady to manufacture this product or based on results of testing using recognized analytical methods performed by a third party, independent laboratory. As such, Brady makes no independent representations or warranties, express or implied, and assumes no liability in connection with the use of this information.

## **WARRANTY**

Brady products are sold with the understanding that the buyers will test them in actual use and determine for themselves their adaptability to their intended uses. Brady warrants to the buyers that its products are free from defects in material and workmanship, but limits its obligation under this warranty to replacement of the product shown to Brady's satisfaction to have been defective at the time Brady sold it. This warranty does not extend to any persons obtaining the product from the buyers. This warranty is in lieu of any other warranty, express or implied, including, but not limited to, any implied warranty of merchantability or fitness for a particular purpose, and of any other obligations or liability on Brady's part. Under no circumstances will Brady be liable for any loss, damage, expense, or consequential damages of any kind arising in connection with the use, or inability to use, Brady's products.

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